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UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Detlef Cieslik et al.
Application Number:	10/534,204
Filing Date:	January 20, 2006
Group Art Unit:	3785
Examiner:	Ljiljana V. Ciric
Title:	HEAT EXCHANGER FOR A REFRIGERATION DEVICE

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APPEAL BRIEF

Pursuant to 37 CFR 1.192, Appellants hereby file an Appeal Brief in the above-identified application. This Appeal Brief is accompanied by the requisite fee set forth in 37 CFR 1.17(f).

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(1) REAL PARTY IN INTEREST

The real party in interest is BSH Bosch und Siemens Hausgeräte GmbH. The application and the invention disclosed in the application were assigned to BSH Bosch und Siemens Hausgeräte GmbH by virtue of an Assignment executed on June 27, 2005, which is recorded at Reel 17022, Frame 312 of the U.S. Patent & Trademark Assignment Records, effective January 17, 2006.

(2) RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) STATUS OF CLAIMS

Claims 1 – 15 and 24 are cancelled. Claims 16-23 and 25-38 are pending in the application. Claims 22, 25 and 32 have been withdrawn from consideration. Claims 20 and 26 are objected to, but have been indicated to recite allowable subject matter. Claims 16-19, 21, 23, 27-31 and 33-38 stand rejected, and the final rejections of these claims are being appealed.

(4) STATUS OF AMENDMENTS

All Amendments, including the Amendment filed November 19, 2010 have been entered.

(5) SUMMARY OF CLAIMED SUBJECT MATTER

A description of the subject matter recited in the pending claims that are argued separately is set forth below, along with an indication of the portions of the specification and drawings that provide support for these features. The reference numbers appearing in the following description correspond to the reference numbers appearing in the drawing figures of the application, which illustrate embodiments of the claimed subject matter.

A. Claims 16 and 30

Claim 16 is directed to a heat exchanger for a refrigeration device. Claim 16 recites a base plate 1 with a tubular pipe 2 for a coolant attached to said base plate 1. A sleeve 7 is arranged on said base plate for receiving a temperature sensor 6. Claim 16 recites that the sleeve 7 is fixed on a surface of said base plate 1 by at least one brace 8 which is connected to said sleeve 7 and which engages on said tubular coolant pipe 2. See Figures 1-3 and the specification between page 4, line 34 and page 5, line 8, and between page 5, line 35 and page 6, line 22.

Independent claim 30 is directed to a refrigeration device that includes a heat exchanger having all of the features recited in claim 16.

B. Claims 23 and 33

Claim 23 depends from claim 16, and claim 33 depends from claim 30. Claims 23 and 33 both recite that at least two braces 8 are connected to said sleeve 7, and that the at least two braces 8 extend out from the same side of the sleeve 7 in the same direction. See Figure 3, and the specification between page 5, line 35 and page 6, line 22.

C. Claims 28 and 35

Claim 28 depends from claim 16 and claim 35 depends from claim 30. Claims 28 and 35 both recite that said tubular pipe 2 and said sleeve 7 are enclosed between said base plate 1 and a film 3 of deformable material. See Figures 1 and 2 and the specification at page 5, lines 1-26.

D. Claim 29

Claim 29 depends from claim 28. In addition to the features discussed above, claim 29 further recites that said film 3 is formed from at least one of bitumen, plastic material or aluminium or a mixture thereof. See the specification at page 5, lines 1-14.

E. Claim 36

Claim 66 depends from claim 23. In addition to the features discussed above, claim 36 further recites that the at least two braces 8 engage the same section of tubular coolant pipe 2. See Figure 2 and the specification between page 5, line 35 and page 6, line 22.

F. Claims 37 and 38

Claim 37 depends from claim 23, and claim 38 depends from claim 33. In addition to the features discussed above, claims 37 and 38 recite that the sleeve 7 and the at least two braces 8 are part of a bracket, and that an aperture is formed in the bracket between the at least two braces 8. See Figure 3 and the specification at page 6, lines 1-33.

(6) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Whether claims 16-19, 21, 27-31, 34 and 35 are anticipated, under 35 USC §102(b), by U.S. Patent No. 6,089,146 to Nam et al. (hereinafter "Nam").

B. Whether claims 23, 33, 37 and 38 are obvious, under 35 USC §103(a), over Nam.

(7) ARGUMENT

A. Claims 16-19, 21, 27, 30, 31 and 34

As noted above, claims 16-19, 21, 27, 30, 31 and 34 were all rejected under 35 USC §102(b) over Nam et al. ("Nam"). Because Nam fails to disclose or suggest all the features of these claims, it is respectfully submitted that the rejections should be withdrawn.

The Nam reference discloses a food storage container which includes a refrigeration device. The refrigeration device includes a plurality of coolant pipes 20 which wrap around the exterior of an inner liner 14. Nam discloses that a temperature sensor 26 can also be attached to the exterior side of the liner 14.

Nam discloses multiple different embodiments of a fixing bracket 30 which can be used to hold a temperature sensor 26 against the exterior side of the inner liner 14. In each of the embodiments, opposite ends of the bracket 30 engage with two separate, spaced apart portions of the coolant line 20. The fixing bracket 30 includes a

rectangular shaped sensor housing portion 32 which is intended to surround three sides of a temperature sensor 26 having a square or rectangular cross-sectional shape. The remaining fourth side of the temperature sensor is engaged with the flat outer surface of the inner liner 14.

An outer wall 10 of the refrigeration device is spaced apart from the upper surface of the fixing bracket 30 and the associated temperature sensor and coolant lines. The space between the inner surface of the outer wall 10 and the upper surfaces of the fixing bracket is filled with an expandable foam insulating material 12.

As noted above, claim 16 is directed to a heat exchanger for a refrigeration device. Claim 16 recites a base plate, a tubular pipe for a coolant attached to the base plate, and a sleeve arranged on the base plate for receiving a temperature sensor. Claim 16 also recites that the sleeve is fixed on a surface of the base plate by at least one brace which is connected to the sleeve and which engages on the tubular coolant pipe. Claim 30 is directed to a refrigeration device, and claim 30 recites features highly similar to those recited in claim 16.

It is respectfully submitted that the Nam reference lacks a sleeve as recited in independent claims 16 and 30. These claims recite that the sleeve is arranged on the base plate for receiving a temperature sensor and that the sleeve is fixed on a surface of the base plate by at least one brace. As explained above, in the Nam reference there is no sleeve which is fixed on a surface of a base plate. Instead, Nam discloses that a three-sided rectangular shaped sensor housing portion of the fixing bracket surrounds only three sides of a temperature sensor. The Nam device relies upon the inner liner of the refrigerator to hold the fourth side of the temperature sensor. Thus, Nam fails to disclose a sleeve for receiving a temperature sensor as required by claims 16 and 30.

Because the Nam reference lacks the above described features of claims 16 and 30, it is respectfully submitted that claims 16 and 30 are allowable. Claims 17-19, 21 and 27 depend from claim 16 and claims 31 and 34 depend from claim 30. It is respectfully that these claims are allowable for the same reasons, and for the additional features which they recite. Accordingly, withdrawal of the rejection of claims 16-19, 21, 27, 30, 31 and 34 is respectfully requested.

B. Claims 23 and 33

Claim 23 depends from claim 16 and claim 33 depends from claim 30. It is respectfully submitted that claims 23 and 33 are allowable for at least the reasons discussed above in connection with claims 16 and 30. In addition, claims 23 and 33 recite additional features which are also not shown or suggested by Nam.

Claims 23 and 33 both recite at least two braces connected to said sleeve, wherein the at least two braces extend out from the same side of the sleeve in the same direction. An embodiment as recited in claims 23 and 33 is illustrated in Fig. 3 of the present application. As shown therein, two braces 8 extend out from the same side of the sleeve 7 in the same direction.

None of the brackets illustrated and described in Nam have two braces which extend out from the same side of a sleeve in the same direction. Instead, in all of the disclosed embodiments having two braces, the braces extend out from opposite sides of a central portion.

The Examiner asserts that it would have been obvious to modify the Nam device so that it includes two braces that extend out from the same side of the sleeve. However, in addition to not disclosing such a structure, Nam does not even hint that such a modification would be possible or desirable. It is respectfully submitted that it requires the impermissible use of hindsight, in view of Applicants' invention, to find any motivation to modify the Nam structure such that it satisfies claims 23 and 33. It is respectfully submitted that claims 23 and 33 are allowable for these additional reasons.

C. Claims 28 and 35

Claim 28 depends from claim 16 and claim 35 depends from claim 30. It is respectfully submitted that claims 28 and 35 are allowable for at least the reasons discussed above in connection with claims 16 and 30. In addition, claims 28 and 35 recite additional features which are also not shown or suggested by Nam.

Claims 28 and 35 both recite that the tubular pipe and said sleeve are enclosed between said base plate and a film of deformable material. In contrast, and as explained above, Nam's sensor fixing bracket 30 is surrounded by expandable insulating foam 12 located between the outer wall 10 and the inner liner 14 of Nam's enclosure. The Examiner asserts that the expandable insulating foam corresponds to

the "film of deformable material" recited in claims 28, 29 and 35. Applicants respectfully disagree.

The expandable foam material 14 is injected into the space between the outer wall 10 and the inner liner 14 during manufacture of the Nam device. This expandable foam is clearly not a "film" as recited in claims 28 and 35. In addition, the expandable foam is not a deformable material, as also recited in claims 28 and 35. Instead, the expandable foam 12 is a thick, rigid insulating material. It is respectfully submitted that claims 28 and 35 are also allowable for these additional reasons.

D. Claim 29

Claim 29 depends from claim 16 and is allowable for at least the reasons discussed above in connection with claim 16. Further, claim 29 recites additional features which are also not disclosed or suggested by Nam.

Claim 29 recites that the film of deformable material is formed from at least one of bitumen, plastic material, aluminium or a mixture thereof. As noted above, the material covering Nam's bracket is not a film. In addition, the material is clearly not bitumen, plastic material, aluminium or a mixture thereof. One of skill in the art, following the teachings of Nam, would never have made the insulating foam material of Nam from one of these materials, nor would that person of ordinary skill in the art substituted one of these materials for the foam insulating material disclosed in Nam. It is respectfully submitted that claim 29 is also allowable for these additional reasons.

E. Claim 36

Claim 36 depends from claim 16 and is allowable for at least the reasons discussed above in connection with claim 16. Further, claim 36 recites additional features which are also not disclosed or suggested by Nam.

Claim 36 recites that at least two braces are connected to said sleeve, and that the at least two braces extend out from the same side of the sleeve in the same direction. Claim 36 goes on to recite that the at least two braces engage the same section of tubular coolant pipe.

As explained above, the Nam fixing bracket includes two extending flanges 36a/36b which extend away from the sensor housing 32 in opposite directions. As a

result, the two extending flanges of the Nam bracket engage different portions of a tubular coolant pipe which are spaced apart from one another. Nam fails to disclose or suggest a structure as recited in claim 36, where at least two braces extend from the same side of a sleeve and engage the same section of tubular coolant pipe. It is respectfully submitted that claim 36 is allowable for these additional reasons.

F. Claims 37 and 38

Claim 37 depends from claim 16 and claim 38 depends from claim 30. It is respectfully submitted that claims 37 and 38 are allowable for at least the reasons discussed above in connection with claims 16 and 30. In addition, claims 37 and 38 recite additional features which are also not shown or suggested by Nam.

Claims 37 and 38 both recite that the sleeve and the at least two braces are part of a bracket, and that an aperture is formed in the bracket between the at least two braces. As explained in the specification at page 6, lines 30-33, a bracket having an aperture as recited in claims 37 and 38 is preferred because a film of deformable material which is laid over top of the bracket can be better attached to an underlying base plate by adhesion achieved through the aperture in the brace.

Nam's brackets lack any features that could be considered similar to what is recited in claims 37 and 38. Applicants note that in rejecting these claims, the Examiner was not even able to come up with a reason why one of skill in the art would have modified the Nam structure to arrive at a structure as recited in claims 37 and 38. It is respectfully submitted that there is no such motivation. Accordingly, it is respectfully submitted that claims 37 and 38 are allowable over Nam for these additional reasons.

(8) CONCLUSION

In view of the foregoing discussion, Appellants respectfully request reversal of the Examiner's rejection.

Respectfully submitted,

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CLAIMS APPENDIX

1-15. (Canceled)

16. (Rejected) A heat exchanger for a refrigeration device, comprising:
a base plate;
a tubular pipe for a coolant attached to said base plate;
a sleeve arranged on said base plate for receiving a temperature sensor; and
said sleeve fixed on a surface of said base plate by at least one brace which is connected to said sleeve and engages on said tubular coolant pipe.

17. (Rejected) The heat exchanger according to Claim 16, including said brace includes a clamping section for clamping onto said tubular coolant pipe.

18. (Rejected) The heat exchanger according to Claim 16, including said sleeve and said brace are configured monobloc.

19. (Rejected) The heat exchanger according to Claim 18, including said sleeve and said brace are formed from a sheet metal blank of flat material.

20. (Objected To) The heat exchanger according to Claim 19, wherein said sleeve is generally cylindrical, said sleeve being produced by rolling an end of said flat material to form a generally cylindrical sleeve.

21. (Rejected) The heat exchanger according to Claim 19, including said flat material is sheet metal.

22. (Withdrawn) The heat exchanger according to Claim 16, including said brace clamped on the sleeve.

23. (Rejected) The heat exchanger according to Claim 16, including at least two braces connected to said sleeve, wherein the at least two braces extend out from the same side of the sleeve in the same direction.

24. Canceled.

25. (Withdrawn) The heat exchanger according to Claim 16, including at least two braces connected to said sleeve, wherein said two braces extend out from said sleeve in opposite directions.

26. (Objected To) The heat exchanger according to Claim 16, including said tubular pipe bears a marking at the point of application of said brace.

27. (Rejected) The heat exchanger according to Claim 16, including said tubular pipe and said sleeve are connected to said base plate by an adhesive layer.

28. (Rejected) The heat exchanger according to Claim 16, including said tubular pipe and said sleeve are enclosed between said base plate and a film of deformable material.

29. (Rejected) The heat exchanger according to Claim 28, including said film formed from at least one of bitumen, plastic material or aluminium or a mixture thereof.

30. (Rejected) A refrigeration device, comprising:

a heat exchanger including a base plate;

a tubular pipe for a coolant attached to said base plate;

a sleeve arranged on said base plate for receiving a temperature sensor; and

said sleeve fixed on a surface of said base plate by at least one brace which is connected to said sleeve and engages on said tubular coolant pipe.

31. (Rejected) The refrigeration device according to Claim 30, including said sleeve and said brace are formed from a sheet metal blank of flat material.

32. (Withdrawn) The refrigeration device according to Claim 30, including said brace clamped on the sleeve.

33. (Rejected) The refrigeration device according to Claim 30, including at least two braces connected to said sleeve, wherein the at least two braces extend away from the same side of the sleeve in the same direction.

34. (Rejected) The refrigeration device according to Claim 30, including said tubular pipe and said sleeve are connected to said base plate by an adhesive layer.

35. (Rejected) The refrigeration device according to Claim 30, including said tubular pipe and said sleeve are enclosed between said base plate and a film of deformable material.

36. (Rejected) The heat exchanger according to claim 23, wherein the at least two braces engage the same section of tubular coolant pipe.

37. (Rejected) The heat exchanger according to claim 23, wherein the sleeve and the at least two braces are part of a bracket, and wherein an aperture is formed in the bracket between the at least two braces.

38. (Rejected) The refrigeration device according to claim 33, wherein the sleeve and the at least two braces are part of a bracket, and wherein an aperture is formed in the bracket between the at least two braces.

EVIDENCE APPENDIX

NONE

RELATED PROCEEDINGS APPENDIX

None